



Idaho Crop & Livestock Producer News

Cooperating with the Idaho State Department of Agriculture
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Idaho's Agricultural Fertilizer and Chemical Usage – Potatoes

This issue of the Idaho Crop and Livestock Producers' News covers the results of the 2010 Agricultural Resource Management Survey, Phase II. Fertilizer and pesticide use are reported for selected states and the U.S.

For more information contact us at nass-id@nass.usda.gov or at 1-800-691-9987. Thank you for reporting and your continued support.

Sincerely,

Vince Matthews
Director

In Idaho, virtually all potato acreage on the farms sampled received fertilizer applications with nitrogen (N). The average total application rate for Nitrogen was 254 pounds per acre, up from the 225 pounds per acre measured in 2005. The average total application rates for phosphate (P) and sulfur (S) also increased from 2005. Application rates for potash (K) were unchanged from 2005 at 134 pounds per acre. While total application rates were up for most macronutrients, the number of applications to apply these fertilizers were also up from 2005, resulting in lower rates per application for all macronutrients except sulfur (S).

The percentage of Idaho's fall potato acreage treated with pesticides increased from 2005 for all types of pesticides. For 2010, Idaho's most commonly applied herbicide was metribuzin. The most commonly used insecticide was imidacloprid, and the most commonly applied fungicide was azoxystrobin.

Fall Potatoes: Fertilizer and Chemical Applications, Total Acreage & Percentage Receiving Applications, Major States & Total, 2005 & 2010

State	Planted Acreage		Fertilizer by Percent of Acres Treated ^{1/}								Pesticides by Percent of Acres Treated ^{2/}							
			Nitrogen		Phosphate		Potash		Sulfur		Herbicide		Insecticide		Fungicide		Other	
	2005	2010	2005	2010	2005	2010	2005	2010	2005	2010	2005	2010	2005	2010	2005	2010	2005	2010
1,000 Acres			Percent								Percent							
CO	58	56	92	97	86	92	64	66	89	93	78	92	57	93	78	98	34	74
ID	325	295	100	100	99	96	92	91	82	81	90	98	65	67	81	93	49	63
ME	58	55	100	99	100	99	100	95	(D)	(D)	100	93	91	91	100	100	12	73
MI	43	44	99	100	94	98	100	100	58	(D)	98	90	97	90	98	96	2	67
MN	48	45	100	98	100	100	81	100	55	80	97	90	97	99	98	100	8	48
ND	92	84	100	100	100	89	96	84	54	44	89	89	76	85	96	96	7	60
WA	154	135	100	100	98	99	92	94	89	90	96	98	97	97	99	99	70	80
WI	68	63	100	100	99	100	99	93	72	91	99	82	97	91	99	96	49	92
Total	846	776	99	99	98	96	92	90	72	73	92	94	79	83	90	96	40	69

^{1/} Refers to acres receiving one or more applications of a specific fertilizer.

^{2/} Refers to acres reported as receiving one or more applications of a specific pesticide class.

(D) Withheld to avoid disclosing data for individual operations.

Fall Potatoes: Agricultural Fertilizer and Chemical Applications, Idaho

Agricultural Chemicals	Area Applied ^{2/}		Applications		Rate Per Application		Rate Per Crop Year		Total Applied	
	2005	2010	2005	2010	2005	2010	2005	2010	2005	2010
Fertilizers:	Percent		Number		Pounds Per Acre		Million Pounds			
Nitrogen	100	100	4.8	6.1	47	42	225	254	72.9	75.0
Phosphate	99	96	2.0	3.1	88	61	178	188	56.9	53.2
Potash	92	91	1.8	1.9	73	71	134	134	40.0	35.9
Sulfur	82	81	2.0	2.9	41	44	81	125	21.7	30.0
Herbicides:	Percent		Number		Pounds Per Acre		1,000 Pounds			
Dimethenamid	-	5	-	1.0	-	0.908	-	0.908	-	12
Dimethenamid-P	17	32	1.0	1.0	0.761	0.760	0.761	0.760	42	71
EPTC	38	38	1.0	1.1	3.166	3.724	3.219	4.013	396	445
Glufosinate-Ammonium	-	24	-	1.0	-	0.198	-	0.198	-	14
Glyphosate Iso.Salt	4	(D)	1.0	(D)	0.881	(D)	0.881	(D)	10	(D)
Metribuzin	84	94	1.1	1.0	0.422	0.444	0.452	0.463	124	129
Pendimethalin	38	55	1.0	1.0	0.719	0.723	0.719	0.723	90	118
Rimsulfuron	28	22	1.0	1.0	0.022	0.020	0.022	0.020	2	1
S-Metolachlor	4	2	1.0	1.0	1.526	1.286	1.565	1.286	21	6
Trifluralin	2	(D)	1.1	(D)	0.453	(D)	0.487	(D)	3	(D)
Insecticides:										
Aldicarb	6	(D)	1.0	(D)	2.613	(D)	2.613	(D)	53	(D)
Bifenthrin	-	7	-	1.5	-	0.076	-	0.114	-	2
Carbofuran	5	(D)	1.0	(D)	0.826	(D)	0.826	(D)	14	(D)
Cyfluthrin	26	14	1.2	1.5	0.030	0.030	0.037	0.044	3	2
Diazinon	3	-	1.0	-	2.412	-	2.412	-	25	-
Endosulfan	2	(D)	1.0	(D)	0.647	(D)	0.647	(D)	5	(D)
Esfenvalerate	17	13	1.1	1.1	0.037	0.043	0.039	0.047	2	2
Ethoprop	3	(D)	1.0	(D)	5.246	(D)	5.246	(D)	47	(D)
Fipronil	-	8	-	1.0	-	0.099	-	0.099	-	2
Imidacloprid	32	45	1.2	1.2	0.077	0.143	0.095	0.166	10	22
Methamidophos	4	-	1.0	-	0.897	-	0.936	-	12	-
Oxamyl	10	20	2.0	1.9	0.815	0.987	1.608	1.875	51	109
Phorate	11	(D)	1.0	(D)	2.683	(D)	2.683	(D)	95	(D)
Pymetrozine	5	-	1.4	-	0.084	-	0.118	-	2	-
Thiamethoxam	9	4	1.0	1.0	0.047	0.036	0.047	0.036	1	(Z)
Fungicides:										
Azoxystrobin	36	57	1.4	1.2	0.116	0.115	0.159	0.137	19	23
Boscalid	15	54	1.1	1.4	0.254	0.241	0.285	0.329	14	53
Chlorothalonil	28	29	1.8	1.2	0.985	0.991	1.776	1.198	162	102
Copper Hydroxide	4	10	1.0	1.0	0.382	0.523	0.396	0.523	5	15
Cymoxanil	7	13	1.0	1.0	0.115	0.095	0.115	0.097	3	4
Difenoconazole	-	8	-	1.4	-	0.106	-	0.145	-	4
Famoxadone	6	13	1.0	1.0	0.115	0.095	0.115	0.097	2	4
Fluazinam	8	11	1.0	1.7	0.210	0.215	0.212	0.357	5	12
Flutolanil	5	17	1.0	1.0	0.536	0.552	0.536	0.552	8	28
Mancozeb	54	50	1.9	1.4	1.463	1.125	2.824	1.576	500	234
Mandipropamide Techn	-	15	-	1.5	-	0.329	-	0.490	-	22
Mefenoxam	12	20	1.4	1.2	0.359	0.191	0.497	0.230	19	13
Metiram	3	-	1.2	-	1.604	-	1.969	-	21	-
PCNB	2	(D)	1.0	(D)	2.016	(D)	2.016	(D)	10	(D)
Phosphorous Acid	3	2	2.3	2.0	1.011	5.226	2.311	10.292	19	51
Pyraclostrobin	19	19	1.4	1.1	0.123	0.110	0.177	0.119	11	7
Zoxamide	5	11	1.0	1.2	0.139	0.142	0.139	0.173	2	6
Other Chemicals:										
Dichloropropene	5	5	1.0	1.0	177.501	177.843	177.501	177.843	2,984	2784
Diquat Dibromide	5	5	1.0	1.0	0.430	0.395	0.438	0.409	7	6
Maleic Hydrazide	11	12	1.0	1.0	2.203	2.098	2.203	2.098	81	72
Metam-Sodium	14	28	1.0	1.0	141.239	133.221	141.239	133.221	6,645	10928
Sulfuric Acid	25	(D)	1.0	(D)	309.797	(D)	312.077	(D)	25,708	(D)

1/ Planted acreage in 2005 for Idaho was 325,000 acres and planted acres in 2010 for Idaho was 295,000 acres.

2/ Refers to acres receiving one or more applications of a specific agricultural chemical.

(D) Withheld to avoid disclosing data for individual operations.

(Z) Less than half the rounding unit.

Note: Data may not multiply across due to rounding.

Trade Names, Common Names, and Classes

The following is a list of common name, associated class, and trade name of active ingredients in this publication. The classes are herbicides (H), insecticides (I), fungicides (F), and other chemicals (O). This list is provided as an aid in reviewing pesticide data. Pre-mixes are not cataloged. The list is not complete for all pesticides used on field crops and NASS does not mean to imply use of any specific trade name.

Class	Common Names	Trade Names
I	Aldicarb	Temik 15G, Temik 15G (Potatoes Only)
F	Azoxystrobin	Amistar, Headway (Turf), Quadris, Quadris Gold, Quadris Opti, Quadris Top, Quilt, Uniform
I	Bifenthrin	Bifenthrin 2EC, Bifenture EC, Brigade 2EC, Brigadier, Capture 2EC, Capture LFR, Discipline 2EC, Fanfare 2EC, Hero, Hero EW, SmartChoice 5G, Sniper, Steed, Tundra, Tundra EC
F	Boscalid	Endura (70WG)
I	Carbofuran	Hyvar X-L
F	Chlorothalonil	Applause 720 (aka Initiate 720), Bravo 500, Bravo 720, Bravo Ultrex, Bravo Weather Stik, Bravo ZN, Chloronil 720, Echo 720, Echo 90DF, Echo Zn, Equus 500 ZN, Equus 720, Equus 720 SST, Equus DF, Initiate 7210 (AKA Applause 720), Quadris Opti, Ridomil Gold Bravo L (7008 & 7286), Ridomil Gold Bravo SC, Ridomil Gold/Bravo (WP)
F	Copper Hydroxide	Champ Dry Prill, Champ Formula 2, Champion WP, Kocide 2000, Kocide 3000, Nu-Cop 3L, Nu-Cop 50DF, Ridomil Gold/Copper
I	Cyfluthrin	Aztec 2.1% Granular, Aztec 4.67% Granular, Baythroid 2 (EC), Defcon 2.1G, Leverage 2.7, Tombstone, Tombstone Helios
F	Cymoxanil	Curzate 60DF, Tanos
I	Diazinon	Diazinon 4E, Diazinon AG600 WBC
O	Dichloropropene	Telone C-17, Telone II
F	Difenoconazole	Quadris Top, Revus Top
H	Dimethenamid	Establish, Guardsman
H	Dimethenamid-P	G-Max Lite, Guardsman Max, Integrity, Outlook, Propel ATZ, Sortie ATZ Lite, Watchman
H	Diquat Dibromide	Diquash Ag, Diquat, Diquat E-Pro 2L, Diquat Herbicide, Diquat Water, Weed Killer, Reglone
I	Endosulfan	Endosulfan 3EC, Phaser (3EC), Thionex (Thiodan) 3EC, Thionex 50W/WSB
H	EPTC	Eptam 7-E, Eptek 7EC, Eradicane 6.7E
I	Esfenvalerate	Adjourn, Asana, Asana XL
I	Ethoprop	Mocap 15G, Mocap EC
F	Famoxadone	Tanos
I	Fipronil	Reason 500 SC
F	Fluazinam	Omega 500F
F	Flutolanil	Moncut 50WP, Moncut 70 DF
H	Glufosinate-Ammonium	Ignite, Ignite 1SC (aka Rely), Liberty, Liberty ATZ, Rely 200, Rely 280, Rely Herbicide, Rely Herbicide (aka Ignite 1SC)
H	Glyphosate Iso. Salt	Alecto 41S, Big N' Tuf, Bronco (4EC), Buccaneer, Buccaneer Plus, ClearOut 41 Plus, Cornerstone, Cornerstone Plus, Credit, Credit Duo Extra, Credit Xtreme, Durango, Eraser Systemic Weed & Grass Killer, Field Master, Gly Star Original, Gly Star Plus, Gly-4 Plus, Glyfos X-TRA, GLYPHOGAN PLUS HERBICIDE, Glyphomax, Glyphomax Plus, Glyphomax XRT, Glyphosate 4 (Turf & Ornamental), Glyphosate 41% Plus, Glyphosate Original, Glysupreme Plus, Helosate Plus, Honcho, Honcho Plus, Imitator Plus, Mad Dog Glyphosate, Makaze, Mikaze Yield Pro, Prosecutor Pro, Protocol, Ranger (2EC), Rascal, Rascal Plus, Roundup Custom, Roundup Original, Roundup Original II, Roundup Original Max, Roundup Pro (T & O), Roundup Super Concentrate, Roundup Ultra, Roundup Ultra Max, Roundup UltraMax II, Roundup Weather Max, RT 3 Herbicide, RT Master, Showdown, Staple Plus, StrikeOut Extra, Wise Up Plus Glyphosate Herbicide
I	Imidacloprid	Admire 2 Flowable, Admire Pro, Advise 2FL, Alias 2F, Brigadier, Couraze Max 4F, Dominion 4LB, Imidacloprid 2 FL AG, Imidacloprid 2F, Impulse, Leverage 2.7, Leverage 360, Macho 4.0 Flowable, Mallet 2 F T&O Insecticide, Mana Alias 4F, Montana, Nuprid 2F, Nuprid 2SC, Nuprid 4.6F Pro, Prey 1.6 Insecticide, Provado 1.6 Flowable, Sherpa, Trimax, Widow, WRANGLER
O	Maleic Hydrazide	Royal MH-30, Royal MH-30 SG, Royal MH-30 Xtra, Sprout Stop, Super Sprout Stop
F	Mancozeb	Cuprofix MZ Disperss, Dithane 75DF Rainshield (For T & O), Dithane DF Rainshield, Dithane DF/70, Dithane F-45 Rainshield, Dithane M-45 (WP), Gavel 75DF, Mancozeb 6% Nubark, Mancozeb 80% WP, Manex II (4EC), Manzate 200 DF, Manzate 200 WP, Manzate 75DF, Manzate Flowable, Manzate Pro-Stick, Penncozeb (80WP), Penncozeb 4FL, Penncozeb 75, Ridomil Gold MZ
F	Mandipropamide Techn	Revus, Revus Top
F	Mefenoxam	Quadris Gold, Quell, Ridomil Gold Bravo L, Ridomil Gold Bravo SC, Ridomil Gold EC, Ridomil Gold MZ, Ridomil Gold PC, Ridomil Gold PC GR, Ridomil Gold Platinum, Ridomil Gold SL, Ridomil Gold/Bravo (WP), Ridomil Gold/Copper, Ultra Flourish, Uniform
O	Metam-Sodium	Metastar 2E, Ridomil 2E
I	Methamidophos	Monitor 4 Spray, Monitor 4 Spray (For Cotton & Potatoes)
F	Metiram	Polyram 80 DF
H	Metribuzin	Boundary, Boundary 6.5EC, Dimetric DF 75%, Metri 4F, Metri DF, Metribuzin 75DF, Sencor 4, Sencor DF (75%), TriCor DF
I	Oxamyl	Vydate C-LV, Vydate L
F	PCNB	Blocker 10G, Blocker 4F, Ridomil Gold PC, Ridomil Gold PC GR
H	Pendimethalin	Acumen, Corral 2.68 G, Framework 3.3 EC, Pendant 3.3 EC herbicide, Pendimax 3.3, Pendimethalin, Prowl 3.3 EC, Prowl DG, Prowl H2O, Stealth
I	Phorate	Ambush, Ambush 25W, Arctic 3.2 EC, PermaStar AG, Permethrin, Permethrin 3.2 AG, Permethrin 3.2 EC, Perm-UP 3.2 EC, Pounce 1.5G, Pounce 3.2EC
F	Phosphorous acid	Phostrol, Topaz
I	Pymetrozine	Fulfill
F	Pyraclostrobin	Cabrio EG, Headline, Headline AMP
H	Rimsulfuron	Accent Gold, Basis, Basis Gold, Matrix (aka Shadeout), Matrix SG, Prequel, Pruvin, Require Q, Resolve DF, Resolve Q, Resolve SG, Steadfast, Steadfast ATZ, Steadfast Q
H	S-Metolachlor	Bicep II Magnum, Bicep Lite II Magnum, Boundary, Boundary 6.5EC, Brawl, Brawl II, Camix, Charger Max, Charger Maz ATZ, Cinch ATZ, Dual II Magnum, Dual II Magnum SI, Dual IIG Magnum, Dual Magnum, Expert, Halex GT, Lexar, Lumax, Medal II, Sequence
O	Sulfuric Acid	Sulfuric Acid Potato Vine Desiccant
I	Thiamethoxam	Actara WDG, Centric, CruiserMaxx for Potatoes, Endigo ZC, Platinum, Platinum 75 SG, Ridomil Gold Platinum
H	Trifluralin	Treflan 4L, Treflan E.C., Treflan HFP, Trifluralin 10G, Trifluralin 4EC, Triflurex HFP, Trilin, Trust 4EC
F	Zoxamide	Gavel 75DF

Fall Potatoes: Pest Management Practices, Idaho and Program States, 2010

Practice	Percent of Acres Receiving Practice		Percent of Farms Receiving Practice	
	Idaho	Program States	Idaho	Program States
Prevention Practices:				
Beneficial insect or vertebrate habitat maintained	20	22	19	22
Crop residues removed or burned down	12	12	12	13
Equipment and implements cleaned after field work to reduce spread of pests	83	82	83	75
Field edges, ditches, or fence lines were chopped, sprayed, mowed, plowed, or burned	75	78	73	75
Flamer used to kill weeds	6	5	6	4
No-till or minimum till used	11	26	15	26
Plowed down crop residue using conventional tillage	62	70	64	72
Seed treated for insect or disease control after purchase	82	83	83	78
Water mgmt practices used	59	56	58	43
Avoidance Practices:				
Crop or plant variety chosen for specific pest resistance	25	34	24	33
Planting locations planned to avoid cross infestation of pests	26	42	26	40
Planting or harvesting dates adjusted	20	26	21	26
Rotated crops during past 3 years	87	92	91	94
Row spacing, plant density, or row directions adjusted	24	28	25	27
Monitoring Practices:				
Diagnostic laboratory services used for pest detection via soil or plant tissue analysis	48	63	46	54
Field mapping data used to assist decisions	37	36	39	30
Scouted - established process used	41	58	43	52
Scouted - for pests due to a pest advisory warning	20	36	20	31
Scouted - for pests due to a pest development model	30	37	27	31
Scouted - for pests or beneficial organisms - not scouted	1	(Z)	1	1
Scouted - for pests or beneficial organisms by conducting general observations while performing routine tasks	18	12	22	18
Scouted - for pests or beneficial organisms by deliberately going to the crop acres or growing areas	81	88	77	82
Scouted for diseases	98	98	98	97
Scouted for diseases - by employee	20	22	20	17
Scouted for diseases - by farm supply company or chemical dealer	11	13	8	9
Scouted for diseases - by independent crop consultant or commercial scout	22	28	23	27
Scouted for diseases - by operator, partner, or family member	47	38	49	47
Scouted for insects & mites	98	98	98	97
Scouted for insects & mites - by employee	20	22	20	17
Scouted for insects & mites - by farm supply company or chemical dealer	13	14	9	9
Scouted for insects & mites - by independent crop consultant or commercial scout	22	27	23	26
Scouted for insects & mites - by operator, partner, or family member	45	37	48	47
Scouted for weeds	99	96	99	90
Scouted for weeds - by employee	21	23	20	18
Scouted for weeds - by farm supply company or chemical dealer	8	12	6	9
Scouted for weeds - by independent crop consultant or commercial scout	21	25	22	25
Scouted for weeds - by operator, partner, or family member	50	40	51	48
Weather data used to assist decisions	72	79	72	76
Written or electronic records kept to track the activity of pests	51	65	51	59
Suppression Practice:				
Beneficial organisms applied or released	9	5	7	4
Biological pesticides applied	5	9	3	8
Buffer strips or border rows maintained to isolate organic from non organic crops	9	20	9	18
Floral lures, attractants, repellants, pheromone traps, or biological pest controls used	1	7	1	9
Ground covers, mulches, or other physical barriers maintained	65	59	66	58
Pesticides with different mechanisms of action used to keep pest from becoming resistant to pesticides	65	71	65	63
Scouting data compared to published information to assist decisions	39	48	36	49
Trap crop grown to manage insects	(Z)	5	1	4

(Z) Less than half the rounding unit.